
Dilmun Burial Mounds (Bahrain) No 1542

Official name as proposed by the State Party

Dilmun Burial Mounds

Location

Northern Governorate and Southern Governorate
Bahrain

Brief description

Located in the western part of the island of Bahrain, the Dilmun Burial Mounds were built during the Early Dilmun Period over a period of 300 years, approximately between 2050 and 1750 BCE. The nominated property consists of a serial property which comprises thousands of burial mounds. The mounds are characterized by their architectural design, their interior arrangement including the use of alcoves, and their different types indicating the emergence of social hierarchies. Dilmun Burial Mounds are categorized in five typological groups including Early Type Mounds, Late Type Mounds, Chieftain Type Mounds, Royal Type Mounds and Mounds with subsidiary burials. The nominated property includes all mound types in 21 component parts. Recently published archaeological research has identified the last Dilmun kings as well as the funerary architecture of the Royal Mounds. The great majority of the mounds have not been excavated.

Category of property

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a serial nomination of 21 *sites*.

1 Basic data

Included in the Tentative List

29 May 2008

Background

This is a new nomination.

An extension for this nomination to include Umm Jidr and Wadi as-Sail mound fields is planned for 2022.

Consultations and Technical Evaluation Mission

Desk reviews have been provided by ICOMOS International Scientific Committees, members and independent experts.

An ICOMOS technical evaluation mission visited the property from 24 to 27 September 2018.

Additional information received by ICOMOS

Further information was requested in the Interim Report including: selection of component sites, justification for inscription, protection and conservation.

Additional information was received from the State Party on 21 February 2019 and has been incorporated into the relevant sections of this evaluation report.

Date of ICOMOS approval of this report

13 March 2019

2 Description of the property

Note: The nomination dossier and additional information contain detailed descriptions of this property, its history and its state of conservation. Due to limitations on the length of evaluation reports, this report only provides a short summary of the most relevant aspects.

Description and history

The history of the Dilmun Burial Mounds as a sepulchral tradition is highly connected to settlement activities and land-use patterns throughout the Early Dilmun period. While historical factors influenced the size and number of mounds, the geological constitution of the island of Bahrain dictated their distribution. The southern half of the island consists of desert land and the restricted arable land in the northern and western parts was too valuable to be used as burial grounds. Consequently, the burial sites occur mainly towards Bahrain's central dome area, where the bedrock lies just below the surface.

In general, the Dilmun Burial Mounds can be separated into five groups: Early and Late Type mounds, chieftain mounds, royal mounds, mounds with subsidiary burials, and a special type with an outer ring wall.

The current nomination differs from an earlier proposal which included 23 component parts. Umm Jidr and Wadi as-Sail components have been excluded due to problematic land ownership and access issues. An extension of the current nomination to include these mound fields is planned in 2022.

The nominated property consists of 21 component parts consisting of 6 mound fields, 13 individual Royal Mounds at A'ali, and 2 pairs of large mounds at A'ali, distributed as follows:

Component 1: Madinat Hamad 1 Burial Mound Field (Buri) consists of 754 mounds of the Late Type;

Component 2: Madinat Hamad 2 Burial Mound Field (Karzakkan) consists of 4,262 mounds, the great majority of the Late Type and a smaller number of the Early Type;

Component 3: Madinat Hamad 3 Burial Mound Field (Dar Kulayb) consists of 1,331 mounds of the Late Type;

Component 4: Janabiyah Burial Mound Field consists of 13 mounds of Late Type and five Chieftain Mounds;

Component 5: A'ali East Burial Mound Field consists of 4,669 mounds, most of which are Late Type and two Special Type Mounds with outer ring wall;

Component 6: A'ali West Burial Mound Field consists of 723 mounds, including six Special Type Mounds with outer ring wall; and

Components 7 to 21 consist of mainly single Royal Mounds, with the exception of components 17 and 18, which each include a pair of Royal Mounds.

Early and Late Type Mounds are tumuli placed in close proximity forming dense cemeteries. They are on average 2 to 3 meters in height and 6 to 11 meters in diameter. They are regularly-built grave chambers with various shapes such as L-, T-, H-shaped, or more complex shapes. Walls are built with a dry-stone technique and covered by capstones slabs.

Chieftain Mounds are contemporaneous to the Late Type Mounds. They are larger in size than the average Late Type Mounds, reaching 13 to 26 meters in diameter. They often consist of two-storey burial chambers with four or six alcoves and are accessed through a shaft or a passage.

Royal Mounds are also contemporaneous to the Late Type Mounds. Although both Chieftain and Royal Mounds present the same architectural characteristics, they can be differentiated in size: Royal Mounds display diameters of up to 50 meters. Although this terminology is used, until recently no research has definitively proven the existence of a monarchic dynasty in relation to the mounds. However, in 2017 Steffen Terp Laursen published work which identified two of the last kings in relation to A'ali Royal Mounds 8 and 10.

Mounds with subsidiary burials each consist of a central burial and one or more subsidiary burials connected to it. The best examples of this type are found in Janabiyah and Madinat Hamad 2 fields. The expansion, in terms of subsidiary burials, seems intentional and not of a sudden necessity. The additional burial chambers are surrounded by semi-ring walls, which are attached to either the central burial or to another semi-ring wall. It is assumed that this type was built for individuals who are related, probably the members of a family.

Ring mounds are Special Type Mounds with an outer ring wall. They seem to have been used for a prominent section of society, possibly three stations of paramount rank expressed in the mounds' sizes.

Some evidence has been found to indicate that the mounds were originally constructed as stone towers (Hojlund 1992, 2007; Velde 1994); Mackay (1929) suggested that the mounds were originally cylindrical towers. Examples of standing double walls supported the idea of towers. Later evidence suggests that mounds were ringed twice; one larger outer ground-level ring wall and a higher-level inner wall (Hojlund 2007), suggesting the original shape to be of a terraced building or a ziggurat (Hojlund 2007).

Alcoves or niches are a significant feature of the mounds. Almost every burial chamber has one or more such niches associated with it; they occur as single niches, as pairs or as a group of four niches, usually located at the chamber's corners. Their purpose is unknown.

Most of the burial mounds were looted in ancient times. As a result, grave furniture is missing. Pottery of different shapes and design is found, indicating the ritual of placing offerings. Most of the pottery found is locally produced. However large amounts of pottery produced elsewhere has also been found suggesting that international exchanges took place around 2000 BCE. Other finds include copper and bronze objects, seals, steatite and chlorite vessels, ivory objects, beads, objects made from shells, ostrich eggshells, bitumen-coated baskets and animal remains. Human remains that have been found have been examined and analyzed, providing interesting information such as indications of diet and certain diseases.

The burial mounds were mentioned by explorers and travellers to Bahrain throughout history. The first recorded excavations were in the late 1880s. Development projects between the 1930s and 1970s impacted some of the burial fields. Some mounds were removed to allow for pipelines, roads and other infrastructure.

The Danish Archaeological Expedition has worked in the area since the early 1950s and has shed light on many aspects of the ancient civilization of Dilmun. They were also involved in rescue excavations in the 1960s. Furthermore, British amateur archaeologists examined 47 mounds during the 1960s.

Major rescue archaeological excavations were carried out by the Jordanian Department of Antiquities in 1977 and 1978. After this, work was continued by the Bahrain Directorate of Archaeology. Further work was carried out by Bahrain National Museum with the collaboration of several international teams, including an Australian team, the French Archaeological Mission and the Danish Mission.

The Dilmun Burial Mounds have been protected since 1995 under the National Heritage Law.

Since the submission of the current nomination dossier, a major new publication has come out on the Royal Mounds: *Laursen, S.T., 2017, The Royal Mounds of A'ali in Bahrain: the Emergence of Kingship in Early Dilmun*, Jutland Archaeological Society & BACA.

This significant work provides an immense amount of detail on the Royal Mounds and their development, as well as (for the first time) a radiocarbon chronology; and most significantly, hard evidence for dynastic kingship at A'ali and identification of the tombs of two named kings, using cuneiform inscriptions recovered from one of the mounds (Royal Mound 8).

Boundaries

The area of the 21 components totals 168.45 ha, with buffer zones totalling 383.86 ha.

The boundaries of the component parts of the property are well defined and marked on the ground with fencing, while the boundaries of the buffer zones are defined only on maps.

ICOMOS notes that it is necessary that the boundaries marked out by the Bahrain Authority for Culture and Antiquity (BACA) using GIS mapping are fully shared with the necessary planning authorities, in this case the Ministry of Works, Municipalities Affairs and Urban Planning.

The boundaries of the buffer zones are established with a range of 200 to 300 meters from the property following existing land use and zoning plans. Land use and planning regulations impose restrictions for urban development within the buffer zones; all development proposals within it require approval by BACA.

This approach for delineating the buffer zones may produce difficulties in the future when, for example, houses within a continuous block are within the buffer zone on one side, but outside it on the other. Although municipal zoning regulations are likely to be the same on both sides, it may cause confusion insofar as BACA would have a say in the approval of any changes or new development on the buffer zone side, but not the other. ICOMOS notes that care has been taken to avoid drawing any buffer zone boundary through a single property.

State of conservation

The burial chambers were subjected to grave robberies throughout ancient times, according to archaeological research. This was carried out by cutting a hole in the side of the mound and removing stones from the chamber wall. Looting targeted precious objects such as bronze, ivory and jewellery, while other less valuable objects such as pottery vessels were often left behind.

Some of the Royal Mounds were later used to hold pottery kilns, which were built onto their sides in recent centuries by a nearby village with a community of potters.

The construction of the King Fahad Causeway between Bahrain and Saudi Arabia in 1975, the construction of Madinat Hamad housing complex and other major construction projects in the 1980s and later, impacted on countless burial mounds.

Based on the information provided by the State Party and the observations of the ICOMOS technical evaluation mission, ICOMOS considers that the state of conservation is stable for the vast majority of mounds. The exceptions are for excavated mounds, and most of the Royal Mounds, where more active conservation needs to take place, as acknowledged in the Conservation section of the Management Plan, and its related Action Plan.

ICOMOS considers that the vertical sections of the excavated mounds, or mounds that were opened by illicit removal of large stones from ring walls, require conservation interventions to prevent deterioration by weathering. In addition, the mounds that will be made accessible to visitors need stabilization interventions to secure visitors' safety and to improve presentation of the mounds.

Required interventions should be decided on a case-by-case basis and according to an overall condition assessment survey.

Brief assessment of the state of conservation of the major excavated mounds, and smaller robbed or excavated graves in other mound fields, is given below.

Madinat Hamad 1 (Buri)

Many of the mounds at MH1 (Buri) showed robber pits of unknown date. In most cases, perhaps all, active conservation is probably not required. A brief survey of the mounds is recommended to identify any potentially dangerous examples, and measures to infill or block off robber pits should be considered if any dangerous ones are identified.

Madinat Hamad 2 (Karzakkan)

Several Early and Late Type excavated mounds are exposed in the southeastern part of the property component. Some are deteriorating. Active conservation measures should be considered in these cases to improve visitor interpretation and site preservation, not for all exposed mounds, but the ones which lend themselves best to viewing.

Janabiyah

The large excavated or partially-excavated mounds risk deterioration over time, as vertical sections exposed by excavation and by earlier illicit removals of large stones from the ring walls will eventually erode, and potentially collapse. In addition, eroded sections obscure the structure.

A'ali East

The excavated "Aziz Mound" in particular, in the north of the mound field, is vulnerable to erosion, and the crumbling sections and cavernous exposed chambers may threaten visitor safety. It is recommended to prevent direct visitor access, but also to tidy up the mound and consolidate the sections so that its chambers and internal structures can be viewed.

Royal Mound 1

Interventive conservation has already taken place at RM1, where two dangerously undermined parts of the hollowed-out interior part of the mound had been infilled and plastered. Tall sections of compacted gravelly fill are standing at this Royal Mound and several others, sometimes overhanging. Interventionist measures to remove overhangs may be highly destructive, and the compacted fills appear relatively stable and strong. Research is required to establish the stability and safety of each Royal Mound with large exposed sections, and

whether safety could be improved through intervention, or whether it would be better to partially or completely restrict visitor access.

Royal Mound 2

This mound has not been excavated but has had part of its lower southwestern ring wall stones and edge removed to accommodate a road. It has had some small steps cut into a path in order to help in its ascent but is otherwise in good condition. Its lower edges have recently been supported by the placing of spoil and gravel along them, in order to prevent further erosion and undermining.

Royal Mound 4

This mound has a remarkably well-preserved lower chamber, discovered but not excavated during recent Danish excavations, the small entrance to which is now backfilled and invisible. It is relatively well preserved on the outside. Active conservation and perhaps measures for visitor access should be considered if the lower chamber is ever reopened for excavation, but in the meantime the state of conservation appears stable.

Royal Mound 5

The conservation status of this large mound (Prideaux's Mound A) requires close investigation. It contains a deep cut to the chamber with very high sides, undermined at the end. The compacted fill of the sides, above the original entrance passage walls (dromos), which are well preserved, appears stable but research is required if visitor access is to be permitted. The western side of the mound where the dromos entrance and cut are located was truncated some time before 1961 and appears to have remained stable since then.

Royal Mound 6

This tomb also has high overhanging sections and should be studied before decisions are made about conservation and visitor access.

Royal Mound 7

This mound suffers from a degree of erosion on its northern side and has a very large and deep cut running to its centre with overhanging sides. Study would be required to decide whether remedial action is needed, and the cut may not be suitable for visitor access. Nonetheless it may be possible to position a viewpoint so that the interior can be safely viewed.

Royal Mound 8

Royal Mound 8 has been completely excavated, and recently identified as the tomb of King Yagli'el. The walls are for the most part strong and bonded with original plaster. The mound fill also consists of stones set in layers of plaster, a distinction shared with Royal Mound 10. This lends it a degree of strength and resistance to erosion, but monitoring is essential. However, the lintel of one of the side chambers is cracked and is currently supported by a standing support consisting of a metal pole with wooden pad. This appears to be sufficient for the time being, but expert guidance and research are required to determine whether it should be a long-term solution. Another feature

of Royal Mound 8 is that a high banked area close to one side of it would provide a good viewing point for visitors, if appropriately prepared.

Royal Mound 9

This mound is strongly truncated on the southeastern side, with a high vertical section, undermined at one point, and also has lower eroding sections on its western side. There is no large excavated cavity in its centre however, and interventive conservation may only be required to prevent further erosion of the southeastern face.

Royal Mound 10

Royal Mound 10 is understood to be the tomb of King Ri'mum, and, like Royal Mound 8, is therefore likely to become a focus of touristic interest. It has not been as completely excavated as Mound 8. Like Mound 8 it is constructed of stones set in layers of plaster, but is less stable, having courses of huge stones at its summit, almost in situ but unstable. A Condition Assessment is crucial for this monument as visitor needs must be balanced with safety and sensitive conservation. Vandalism has occurred some years back in the form of bitumen, thick black paint or burnt melted plastic found on a vast carved threshold stone close to the top of the mound. A conservation effort is needed to remove this, and monitoring should continue to prevent re-occurrence. The excavated flanks of Royal Mound 10 reveal remarkable courses of monumental walling, no longer vertical but still in their correct relative positions, which show the height and impressive nature of the monument. These appear to be stable, but monitoring is required.

Royal Mound 11 (paired with Royal Mound 12)

Royal Mound 11 is remarkable in that both its upper and lower chambers are completely preserved (usually only floors and lower parts of the upper chamber remain). Both are clearly visible through a vertical shaft excavated by Prideaux. The mound is also notable for its graffiti from 1917. Viewing of the chambers by visitors may be possible from the outside, while entry would be challenging, but perhaps feasible with well-designed steps.

Unfortunately, the conservation status of Royal Mound 11 has been compromised by the lighting of extensive fires inside the lower chamber in 2011, which caused structural damage and blackening. Before any consideration of external visitor viewing or actual access is made, a conservation assessment is therefore required to establish if the fires caused structural instability (e.g. to the plaster), and whether the blackening can be cleaned off. Research into the stability of Prideaux's shaft would also be necessary. Finally, the lower edges of the mound have been truncated on the western side leaving vertical sections 2-3 m high, which need to be monitored and perhaps stabilised, following research.

Royal Mound 12 (paired with Royal Mound 11)

This mound has a large cut in its top with vertical sections and has also been truncated on all sides around its bottom edge, leaving approximately 2m high vertical sections. These need to be monitored for stability.

Royal Mound 13 (paired with Royal Mound 14)

Royal Mound 13 has a large cavity on its western flank with overhanging sides, representing the eroded remains of Prideaux's excavation trench. The stability of this should be examined and backfilling of this cavity should be considered in order to stabilise and prevent future erosion and collapse.

Royal Mound 14 (paired with Royal Mound 13)

Similar to Royal Mound 11, this mound is unusual in that it has a well preserved upper chamber as well as a lower chamber. The mound appears stable, albeit truncated on its southwestern side, which has left a high vertical section. In the future, re-exposure of the upper and lower chambers, for viewing by visitors, may be feasible if the 1980s backfill is removed in a controlled manner.

Royal Mound 15

The conservation status of this mound is uncertain. The interior of the mound cannot be assessed. There is a rectangular trench running from its centre to its western edge. Parts of its bottom slopes have been removed.

Royal Mound 16

This mound is mostly intact. Parts of the upper ring wall have disintegrated. Much of the material of the slopes has slid off. A condition assessment should be made and a decision is needed as to whether it should be left as is or supported, or backfilled.

Royal Mound 17

The conservation status of Royal Mound 17 is determined by the removal of its outer ring wall in 1961, which has left 2m high vertical edges all around. Also significant is the trench opened by the Danish expedition in 1961-2, which cuts into the centre of the mound and has very high vertical edges. All these vertical sections appear stable but require examination and monitoring for stability. A tree is standing at the entrance to this trench; this appears to be doing no harm but the ramifications of root action in the long term should be considered.

Factors affecting the property

Based on the information provided by the State Party and the observations of the ICOMOS technical evaluation mission, ICOMOS considers that the main factors affecting the property are development pressures due to the limited availability of land and the growing population.

Environmental pressures affecting the property include illegal littering and waste dumping, weathering, particularly heavy rainfall and strong storms, and climate change, particularly the potential increase of intense rainfall. Disasters including fire and earthquakes may impact the property, particularly for mounds that are surrounded by houses. Floods and landslides may also affect the property.

Visitor pressures may affect the property as a cause of erosion as a result of visitors climbing the mounds.

3 Proposed justification for inscription

Proposed justification

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- It bears witness to the flourishing of the Early Dilmun civilization around the 2nd millennium BCE;
- It illustrates globally-unique characteristics with regards to amount, density and scale of the burial mounds but also in terms of construction details, such as their burial chambers;
- It provides essential archaeological and scientific data defining the unique funerary constructions of the Dilmun civilization; and
- It provides unique information about the development of social complexity, land use, and life and death of the Early Dilmun people.

Comparative analysis

The Comparative Analysis is presented in three parts: the internal comparison with burial mound sites within Bahrain and the region that once encompassed the Early Dilmun civilization, within the same chronological framework; the typological comparison with burial sites across the Gulf Region; and external comparison with burial mounds worldwide, including World Heritage and Tentative List properties and other areas throughout the world with a comparable combination of values and attributes.

Comparisons are made based on four criteria:

- Age and period;
- Number and density of mounds;
- Social strata, which the mounds cover; and
- Architecture and design.

The State Party argues that a number of other archaeological sites that are either related to the same historical period or to the tradition of constructing burial mounds, can be found in Bahrain, Saudi Arabia and Kuwait. However, it considers that the components selected are the best examples of their kind and together form a comprehensive picture of the sepulchral tradition of the Early Dilmun Era.

The State Party also argues that the typological analysis at the regional level shows that all neighbouring countries feature burial mound sites but not in terms of the sheer quantity of the Dilmun Burial Mounds. Moreover, the other sites belong to a different chronological period (such as the Tylos burial mounds in Bahrain) or present distinct patterns (as in the case of cairns in Oman and Qatar).

The comparison at the global level shows that burial mounds from the Bronze Age are found in other countries such as the United Kingdom, Denmark, Algeria and Morocco. The State Party argues that whilst some of the sites identified include an impressive number of tumuli, they cannot be compared with the high density of the

cemeteries found in Bahrain. It also considers that the nominated property is exceptional, with regards to architecture and design.

It is claimed that around 14,000–14,500 burial mounds remain. The nominated burials include almost all that survive from a much larger number that was subject to great transformations in the 1980s. The Interim Report requested clarification from the State Party regarding whether what has survived is the result of a choice at the time when these clusters of tombs were protected or not, and how these clusters relate to the scope and disposition of what once existed in order to have an understanding of the methodology which has been used for the selection of the component sites of the current serial nomination.

The State Party submitted additional information in February 2019 stating that the burial mounds that have survived today are partially the result of choice and that they were the first sites inscribed on the National Heritage list in the late 1980s, as they are the most striking and representative examples.

ICOMOS notes that the nominated property does not include two sites that are included on the State Party's Tentative List, namely Barbar Temple and Saar Heritage Park (or the Honeycomb complex). The Interim Report included a request to the State Party to clarify the reasons for excluding these two sites from the nominated property.

The State Party submitted additional information clarifying the rationale for excluding Barbar and Saar Heritage Park from the current serial nomination. According to the State Party neither of the two sites could contribute to the proposed Outstanding Universal Value of the nominated property, as the Barbar Temple is not directly linked to the funerary testimony of the Early Dilmun Civilization. Saar settlement, grave furniture and dietary habits indicate that the Saar settlement area was most likely occupied by a particular cultural group and does not provide information on common burial practices of the Dilmun Civilization.

ICOMOS notes that large numbers and density of tumuli are known in other locations such as the United Kingdom, where the number of mounds is estimated at over 40,000; and Denmark, where recorded mounds number over 9,000 tumuli, while more than 50,000 are estimated. Other locations of tumuli include the Balkans, Algeria and Morocco. However, the exceptional significance of the Dilmun Burial Mounds in Bahrain is due to their architectural design and typology.

The nominated serial property represents a unique sepulchral testimony to the Early Dilmun culture. It is a testimony currently reflected by the proposed selection of component sites.

ICOMOS considers that the comparative analysis justifies consideration of this property for the World Heritage List.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (iii) and (iv).

Criterion (iii): *bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living, or which has disappeared;*

This criterion is justified by the State Party on the grounds that the Dilmun Burial Mounds are the most extensive and most apparent evidence of the Early Dilmun culture. They represent unique sepulchral testimony to the Early Dilmun civilization over a period of about 300 years. The Dilmun Burial Mounds provide a cross section of various social groups in the Early Dilmun society, attesting to thousands of individuals of different age, gender, and social class. They also offer crucial evidence on the evolution of elites and ruling classes.

ICOMOS notes that despite the exclusion of Umm Jidr and Wadi as-Sail mound fields from the current nomination, which contain the majority of Bahrain's surviving Early Type mounds, the present boundaries of the property include Early Type Mounds in Madinat Hamad 2 and A'ali West component parts, some of which are excavated, and others are not. Thus, ICOMOS recommends including the Early Type mounds into the justification for inscription. The Interim Report included this recommendation to the State Party and the additional information submitted by the State Party accepted the recommendation by ICOMOS to include the Early Type Mounds in the justification for inscription of the property.

ICOMOS considers that this criterion is justified.

Criterion (iv): *be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates a significant stage in human history;*

This criterion is justified by the State Party on the grounds that the Dilmun Burial Mounds reflect the evolution of the Early Dilmun civilization and give clues about the emergence of social hierarchies according to the four different mound types. The construction typology of the mounds is exceptional. A very particular and unique characteristic of the Dilmun tumuli construction is the presence of alcoves, which varied in number according to the occupier's social status and were usually filled with mortuary gifts.

ICOMOS recommends adjusting the text to add the Early Type since it is represented within the current property, taking into consideration the inclusion in the property within its current boundaries of Early Type mounds, as mentioned above. ICOMOS further recommends adding the new information on the Royal Mounds, which were recently published in Laursen, S.T., 2017, *The Royal Mounds of A'ali in Bahrain: the Emergence of Kingship in Early Dilmun*, Jutland Archaeological Society & BACA. The Interim Report included this recommendation to the State Party.

The additional information submitted by the State Party accepted the recommendation by ICOMOS to include the Early Type Mounds and to add the new information on the architecture of the Royal Mounds.

ICOMOS considers that this criterion is justified.

ICOMOS considers that the nominated property meets criterion (iii) and (iv).

Integrity and authenticity

Integrity

Most of the tumuli have not been excavated and their fabric is completely intact, except for some ancient looting and erosion by weathering, which has slowly transformed the funeral towers into mounds.

Although more than 80% of the original number have disappeared, the remaining tumuli are still the biggest and densest group of burial mounds in the world.

The property includes various cemeteries of Late Type Early Dilmun Burial Mounds excluding the Early Type mounds of Wadi as-Sail burial field and Umm Jidr burial field that are planned to be nominated as an extension to the present property in 2022. ICOMOS considers that the Early Type mounds should not be excluded from the justification for nominating the property as examples of this type are already included in Madinat Hamad 2 and A'ali West component parts. The Interim Report included this recommendation to the State Party. The additional information submitted by the State Party accepted ICOMOS' recommendation.

The setting has lost part of its integrity because of urban development. Protective and corrective measures have been in place and continue to be implemented by BACA. Nevertheless, development pressures are likely to continue due to the limited area of Bahrain and population growth.

In addition, the visual integrity of the property is compromised by a number of structures, even if most of them conform to the urban planning regulations for the buffer zones of the nominated property:

- A tower-like staircase at the edge of Madinat Hamad 1;
- A large school building at the edge of Madinat Hamad 2;
- A large industrial facility at the southwestern corner of Madinat Hamad 3; and
- The dense urbanization including some encroachments on Royal Mounds 1 to 17.

The removal or burying of the oil pipelines south of A'ali West component part, which is said to be planned, may impact the safety of 40 to 50 mounds flanking the pipelines.

Environmental pressures and visitor pressures affecting the property will be a continuous challenge due to the fragile fabric of the burial mounds, particularly the excavated tombs.

Authenticity

The nominated property is authentic in terms of location, function, material and substance, form and design. The fact that most of the tumuli have not been excavated adds to the authenticity and so does the density of the tumuli, despite past destruction of numerous mounds.

The documentation of past archaeological interventions at the excavated component sites is extremely variable.

Regarding form and design, and materials and substance, the authenticity of the Royal Mounds is not in doubt. These are ancient burial monuments which have been largely unaltered by humans, except by excavation and ancient tomb robbing, and a very limited amount of remedial conservation work to maintain stability.

All these activities are part of the history and maintenance of the monuments rather than matters affecting their authenticity. Some mounds have in the past been used to hold pottery kilns, which were built into their sides in recent centuries. The community was once a village of potters, and several kilns and businesses survived the loss of traditional demand during the switch to the oil economy and resulting changes in local consumption patterns. It is recommended to ensure that no further alteration to the mounds occurs due to the activities of the potters.

ICOMOS considers that the requirements of integrity and authenticity have been met.

Evaluation of the proposed justification for inscription

ICOMOS considers that the comparative analysis justifies the nomination of the property for the World Heritage List. The proposed selection of sites has been justified.

ICOMOS considers that the nominated property meets criteria (iii) and (iv).

The State Party agreed to modify the justification for inscription to include Early Type mounds and new information on the Royal Mounds, which has recently been published.

ICOMOS considers that the nominated property meets the requirements of integrity and authenticity.

Attributes

The attributes carrying the potential Outstanding Universal Value of the property are: the vast and dense burial mound fields; the different types of mounds possibly expressing different social status and human relationships during the Early Dilmun Period; the internal design of the burial chambers including alcoves; human remains, animal remains and archaeological finds from excavations of different mounds from the late nineteenth century up to the present.

ICOMOS considers that consideration of this property for World Heritage listing is justified.

4 Conservation measures and monitoring

Conservation measures

Most mounds are stable under current conditions and are in a good state of conservation. However, the majority of the Royal Mounds and the mounds that have been excavated or exposed by illicit removal of large stones from the ring walls require structural stabilization. This has been considered in the Management Plan and its Action Plan. In some cases, interventions have already been made.

A condition assessment is required for each Royal Mound at A'ali and other excavated mounds in Janabiyah, A'ali East, A'ali West and Madinat Hamad 2 as well as the robbed graves with open cavities in Madinat Hamad 2. According to the Conservation Section of the Management Plan, a comprehensive survey has started, and assessment of conservation is underway.

Limited conservation interventions have taken place at the Royal Mounds, some of which are preventive, and others are curative, following observations made by the DBM Unit during monitoring routines. These include plaster infill, support of cracked masonry, experimental support of unstable vertical sections, and new fencing around some of the Royal Mounds.

The section on "Strategic Objective 3: Research" in the Management Plan identifies research on the impact of the environment on the degradation of monuments as well as research on suitable plaster to be used for maintenance. The section on "Strategic Objective 4: Conservation" identifies possible threats to excavated remains and mitigation measures, including sacrificial layers, geotextiles and partial backfilling.

The Interim Report requested further information on how the documentation of the mounds is created, managed and updated and how documentation of previous archaeological excavations and interventions is managed and integrated into the documentation system, given that they were undertaken by different archaeological missions.

The State Party submitted additional information in February 2019 clarifying that the Bahrain Authority for Culture and Antiquities is in the process of developing a digitized library called 'AdLib' for the Directorate of Archaeology and Museums, which will be used for the management, updating and use of documentation for the nominated property. The working logic of AdLib is explained and screen shots from Madinat Hamad 2 (Karzakkah) Burial Mound Field are given as an example.

The Interim Report requested that the State Party clarify whether knowledge and expertise have been developed with regards to the best conservation strategies for different

types of burial mounds, including reburial and consolidation.

The State Party submitted additional information in February 2019 explaining that experts of the Dilmun Burial Mounds Management Unit and Bahrain Authority for Culture and Antiquities are working on the development of a conservation strategy for the burial mounds and that an external consultancy has been initiated for the same purpose. A holistic conservation strategy is being developed for all burial mounds, which will be followed by a monitoring regime in order to develop the most suitable conservation approaches. In parallel to developing conservation strategies, guidelines for best practice are being issued and surveys with 3D scanning are being initiated and will continue. Also, a new format for licenses for archaeological excavations is now used including the provision of post-excavation treatment of sites.

Monitoring

The nomination dossier defines the following main groups of indicators for monitoring the state of conservation of the property:

- Physical conservation
- Conservation of artefacts
- Visitor impact
- Development control
- Stakeholder involvement
- Capacity building

ICOMOS considers that the monitoring regimes for 'physical conservation' and 'conservation of artefacts' are effective for the monitoring purposes and for feeding into the aim of developing conservation strategies and approaches for the nominated property. Also, monitoring of 'development control' is effective.

The effectiveness for other issues could be improved by adding more indicators: 'visitor impact' could be more effective by adding indicators for monitoring which mounds or mound fields are visited and the visitor impact on management issues, such as littering and crowds and visitor circulation versus carrying capacity of different mounds and/or burial fields. 'Stakeholders' involvement' monitoring could be more effective by adding indicators to monitor engagement and participation of the private sector, particularly in tourism and tourism-related fields. 'Capacity building' monitoring could be more effective by monitoring the staffing level and engagement of consultants to fulfil the roles identified by the Management Plan for the nominated property.

Documentation should be a separate issue to be monitored to ensure the appropriate updating and management of documents, which are essential for effective conservation, management and protection of the property and its features.

ICOMOS considers that conservation measures should be prioritized and implemented once the currently on-going condition assessment survey is complete, particularly for excavated mounds.

ICOMOS considers that monitoring effectiveness could be improved and that documentation should be added to monitoring indicators.

5 Protection and management

Documentation

The first systematic and consistent documentation and inventory of the property was made for the preparation of nominating the property for the Tentative List and is kept by BACA. However, due to the extent and density of the features and the inaccessibility of the unexcavated mounds, much more work is needed to compile and manage the documentation of the property using different tools, techniques and media.

A condition assessment survey is currently being undertaken to guide conservation and management plans. There is a need to manage the resulting documentation and keep them up to date through monitoring and periodical reporting.

There is a need to standardize available documentation which was produced by different archaeological missions and teams over a long period of time. Consistent, up-to-date, accessible baseline documentation is essential for any management and particularly in the event of disasters.

ICOMOS notes the absence of a documentation officer from the DBM Unit, whose responsibility should be standardization, updating and management of documentation for different purposes such as inventory, archaeological research, conservation, management, interpretation and presentation.

Legal protection

The property is protected by the Bahrain Antiquities Law of 1970, as amended by Legislative Decree No. 17 of 1985 and Legislative Decree No. 11 of 1995.

Accordingly, the property's location and boundaries were forwarded to the Ministry of Works, Municipalities Affairs and Urban Planning to be listed in the zoning plans as archaeological areas.

The buffer zones are protected by Decree Law No. 11 of 1995, articles 7 and 8, as they surround protected properties. In addition, the protection of the buffer zones is integrated in the Land Use and Zoning regulations, which are subcategories of the Physical Planning Legislation of 1994.

The protection of archaeological sites is implemented by relevant bylaws such as Resolution No. 28 of 2009 Zoning Regulations for Construction, and Resolution No. 56 of

2009 Implementation Regulations Bylaw for Subdivision of land prepared for Construction and Development.

The National Planning and Development Strategies which was commissioned in 2007 by the Ministry of Works, Municipalities Affairs and Agriculture, and further developed in 2011 and revised in 2015, recognises all the property components as archaeological sites.

Bahrain's Economic Vision 2030 includes among its goals to encourage the preservation of sites and archaeological treasures by protecting them from potential negative effects of development processes. The DBM Unit experts are actively engaged with the planning authorities and other governmental agencies to ensure the protection of the nominated property and the control of its buffer zones, including applying control measures, such as the height of buildings, on sites within the buffer zones that are categorized as "Under Study", "Special Project" or "Ministry of Housing".

Management system

The Directorate of Archaeology and National Heritage within the Bahrain Authority for Culture and Antiquities (BACA) is the responsible department for managing cultural heritage. It includes three sections: Archaeology Section, Heritage Section and Conservation Section.

The Dilmun Burial Mounds Unit (DBM Unit) is under the three sections and is responsible for the management of the nominated property. This Unit is currently staffed by four experts who are multi-tasking, addressing and coordinating issues of archaeology, conservation, interpretation, visitor management, promotion, education and marketing. The DBM Unit will be expanded to include the relevant profiles needed for the various management tasks. It will also outsource some services, particularly in areas of maintenance, security and commercial services.

The management plan identifies six strategic objectives and an action plan for each objective, as follows:

- 1) Administration and finance;
- 2) Land ownership and urban development;
- 3) Research;
- 4) Conservation;
- 5) Awareness-raising and community involvement; and
- 6) Interpretation, presentation and visitor management.

Sources of finance are mainly government funds via biennial budgets and project-specific budgets. Other sources of finance include a trust fund and revenue generated by the property.

The management plan has been approved and implemented since January 2018 to an extent. The list of Actions (including Monitoring activities) will run until December 2023 and includes around 700 Actions distributed across the six Strategic Objectives and from various actors.

ICOMOS notes that although the nomination dossier identifies a number of potential disasters and risks which may impact the property, a risk preparedness plan is missing from the management plan.

Visitor management

Strategic Objective 6 of the management plan addresses interpretation, presentation and visitor management. Planned visitor facilities include:

- Information points in Madinat Hamad 1, Madinat Hamad 3 and Janabiyah;
- A visitor centre in Madinat Hamad 2;
- Interpretation centre in A'ali Burial Mound Field;
- Pottery workshops in A'ali village.

Pre-visit information will be provided via an official website. Plans also include presentation material, publications, guided visits and other activities such as exhibitions and lectures, as well as activities catering for children.

Community involvement

The local community is involved in monitoring the mounds. Part-time employees, guards and wardens are recruited from local communities.

At A'ali, the local community use the mounds in their everyday life. Awareness-raising and education activities by the DBM Unit aim to eradicate harmful use while encouraging use that does not impact the property.

The Interim Report requested from the State Party clarification on meeting the challenges of protecting the Royal Mounds of A'ali, which are greatly intertwined with the urban fabric.

The State Party submitted additional information in February 2019 explaining that these challenges are met on different levels and by different means, including awareness-raising of the local community, municipal control on all building activities, DBM Unit monitoring of any construction activities through a network of local guards, and raising the sense of pride of place in the community by improving the quality of fencing, signage and presentation of the mounds.

Remarkable efforts have been made and more efforts are needed to change community practices, which included in the past cutting into the mounds to provide kiln platforms, animal pens, outdoor meeting spaces, parking spaces, road widening and house building.

The community was made aware of and consulted on the nomination of the property. The following activities, which are outlined in the management plan, have already begun:

- School trips to the Bahrain National Museum;
- Educational workshops for children;
- Local community with regards to building permits reviews within the buffer zones;
- Signage and fencing have been improved;

- Local community participated in cleaning campaigns;
- Interviews and data collection were carried out for compiling the community involvement plan;
- Recorded interviews with the local community were presented in an exhibition in support of outreach activities.

Evaluation of the effectiveness of the protection and management of the nominated property

The management plan for the nominated property is approved and its implementation has started. Adequate legal protection and funding are in place. The DBM Unit is formed, even if not fully staffed, and has been actively managing the property.

A unified study and documentation of the current state of conservation of each element of the property is needed as a priority. The management plan does not address documentation and management of records in a clear way. Also, a documentation officer is needed for the DBM Unit to ensure appropriate planning and management of documents and records.

A risk management plan should be developed and added to the management plan.

ICOMOS considers that the protection and management of the property are adequate. A unified study and documentation of the current state of conservation of each element of the property is needed as a priority. Documentation management needs should be addressed, and a risk management plan should be developed and endorsed.

6 Conclusion

ICOMOS considers that the Early Type mounds should be included in the justification for inscription as the present boundaries of the nomination include examples of the Early Type mounds. This inclusion would enhance the integrity of the property as it would include all types of Dilmun burial mounds, even if the major examples of the Early Type are within Umm Jidr and Wadi as-Sail Mound Fields that are planned for nomination as an extension of the present nomination in 2022. The inclusion of the Early Type mounds would support the justification of criteria (iii) and (iv) as the most extensive and most apparent evidence of the Early Dilmun culture. They represent unique sepulchral testimony to the Early Dilmun civilization. The revised justification for inscription should also include newly published information on the Royal Mounds.

The State Party has agreed with this recommendation.

ICOMOS considers that the serial approach is justified, the selection of sites is appropriate, and the nominated property meets criteria (iii) and (iv) and conditions of integrity and authenticity.

The lack of complete and consistent documentation weakens the authenticity of the property and poses a problem for the management of the property. This issue should be tackled by a dedicated strategic objective in the management plan, an indicator for regular monitoring, and the creation of a documentation officer at the DBM Unit.

Conservation measures should be prioritized and implemented once the currently on-going condition assessment survey for the property has been completed.

The main threats to the property are development pressures, environmental pressures and visitor pressures. Disasters may include heavy rainfall, strong storms, earthquakes and fire. Legal protection and management systems are adequate.

7 Recommendations

Recommendations with respect to inscription

ICOMOS recommends that the Dilmun Burial Mounds, Bahrain, be inscribed on the World Heritage List on the basis of **criteria (iii) and (iv)**.

Recommended Statement of Outstanding Universal Value

Brief synthesis

The Dilmun Burial Mounds is a serial property formed by 21 archaeological sites located in the western part of the island of Bahrain. Six of the selected site components are burial mound fields consisting of some dozen to several thousand tumuli. Together they comprise about 11,774 burial mounds. The remaining 15 site components consist of 13 single royal mounds and two pairs of royal mounds, all embedded in the urban fabric of A'ali village.

The Dilmun Burial Mounds were constructed during the Early Dilmun Period over a period of 300 years, approximately between 2050 and 1750 BCE. The property encompasses the most representative sites of Early and Late Type Dilmun Burial Mound construction. The burial mounds bear witness to the flourishing of the Early Dilmun civilization around the 2nd millennium BCE. During that period, Bahrain gained economic importance on an international level as a trade hub which led to population growth and, as a consequence, to a more diversified social complexity. The latter is best reflected in the extensive necropoli with their variety of graves, comprising burial mounds of various sizes, as well as chieftain mounds and the grandest of them all, the royal mounds.

Archaeological evidence shows that the burial sites were originally not constructed as mounds but as cylindrical low towers. The royal mounds, characterized by their pronounced sizes and elaborate burial chambers, were constructed as two-storeyed sepulchral towers forming a ziggurat-like shape. Two of the last Dilmun kings have

been identified as Ri' Mum and Yagli-'El in relation to the royal mounds 8 and 10.

The Dilmun Burial Mounds illustrate globally-unique characteristics not only with regards to their numbers, density and scale but also in terms of construction typology and details, such as their alcove-equipped burial chambers.

Criterion (iii): The Dilmun Burial Mounds represent unique sepulchral testimony to the Early Dilmun civilization over a period of 300 years. As remains of settlements are scarce and buried under thick layers of soil, the Dilmun Burial Mounds are the most extensive and most apparent evidence of the Early Dilmun culture. At the time, the newly gained prosperity allowed the island's ancient inhabitants to develop an elaborate burial tradition applicable to the entire population. The excavated mounds provide a cross section of various social groups in the Early Dilmun society, attesting to thousands of individuals of different age, gender, and social class. They also offer crucial evidence on the evolution of elites and ruling classes. The ancient inhabitants of Bahrain understood the special geological configuration of the island and used less fertile land for the development of these extraordinary cemeteries.

Criterion (iv): The evolution of the Early Dilmun civilization is reflected in the architecture of the Dilmun Burial Mounds. Four different mound types give clues about the emergence of social hierarchies. Even though the burial mounds can be divided according to variations in size and interior design, the basic layout of the mounds remains the same throughout the 300-year period. The construction typology is exceptional. The majority of the tombs were constructed as single-storeyed small cylindrical towers while some of the bigger two-storeyed examples were built in a ziggurat-like shape. A very particular and unique characteristic of the Dilmun tumuli construction is the presence of alcoves. Depending on the occupant's social status there can be up to six of such alcoves which were usually filled with mortuary gifts.

Integrity

The serial property displays the original distribution of Early and Late Type Dilmun Burial Mounds, organized in individual cemeteries. It excludes two fields which provide evidence of the great majority of Early Type Early Dilmun Burial Mounds (Wadi as-Sail and Umm Jidr) which are planned to be nominated as an extension in a second nomination phase. The five distinct types of burial mounds reflect a hierarchy of the ancient population and present a cross section of various social groups of the Early Dilmun society.

Most of the tumuli have not been excavated and their fabric is completely intact, solely impacted by occasional ancient looting and natural erosion that has transformed the once sepulchral towers into mounds. As a result of previous development activities, the setting has lost parts of its integrity. In particular the direct vicinity of residential

developments affects the visual integrity of some of the property components. However, urban developments have come to a halt due to effective arrangements in the protection and management of the site. Corrective measures are underway and include the introduction of green belts around the ancient cemeteries in order to improve their visual setting.

Authenticity

The serial property is authentic in terms of its location, function, material and substance, form and design, as well as density. Despite having been impacted by erosion and partially by looting in ancient times, the mounds' architecture, layout and interior design remain intact. The particular characteristics and distribution of Early and Late Types of Early Dilmun Burial Mounds within the cemeteries are excellently displayed. The density of fields in a limited area is exceptional as well as the unique concentration of burial mounds within each cemetery.

Management and protection requirements

All site components of the Dilmun Burial Mounds serial property are registered as National Monuments and are protected according to the Kingdom of Bahrain Legislative Decree No. 11 of 1995 concerning the Protection of Antiquities. The restrictions for urban development within the buffer zones of the site components are integrated in the Land Use and Zoning regulations which are subcategories of the Physical Planning Legislation of 1994. Site administration is carried out by the Bahrain Authority for Culture and Antiquities. A unit with the Directorate has been designated for the administration of the property.

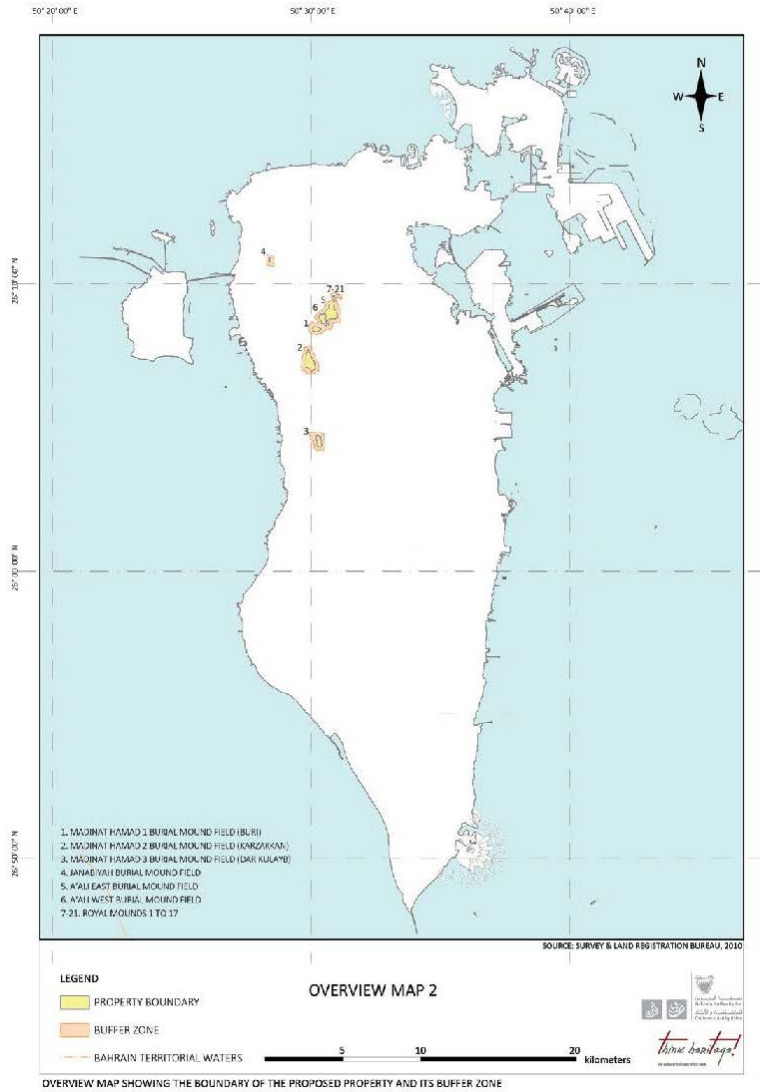
The Dilmun Burial Mounds Management Plan has been approved and effective since January 2018 for a period of five years, including long-term objectives for the site. It is envisioned as an integrated management and action plan with the following key strategic themes: administration and finance, land ownership and development, research, conservation, awareness-raising and community involvement, as well as interpretation, presentation and visitor management. The management plan works also as a protection plan as it addresses the main threats to the site components, which are development pressures, pollution and erosion.

Additional recommendations

ICOMOS further recommends that the State Party give consideration to the following:

- a) Completing the condition assessment survey for all the features of the property, then developing a conservation action plan accordingly,
- b) Adding documentation as a strategic objective to the management plan,
- c) Adding more indicators to monitor visitor impact, stakeholders' involvement and capacity building and documentation as a separate issue to be monitored,

- d) Adding a documentation officer position to the DBM Unit,
- e) Developing a risk management plan,
- f) Completing all required actions to ensure that the extension of this property to include Umm Jidr and Wadi as-Sail mound fields is implemented for 2022;



Map showing the location of the nominated components



Madinat Hamad 3 Burial Mound Field



Partially excavated Chieftain Mound



Royal Mound 1



Burial chamber at Royal Mound 8